REMARKS/ARGUMENTS

The Examiner's attention to the present application is noted with appreciation.

The Examiner rejects claims 1-32 as being unpatentable over U.S. Patent No. 4,972,075 to Hamada et al. in view of U.S. Patent No. 5,859, 424 to Norton et al. Such rejection is respectfully traversed. The Examiner states that Hamada et al. disclose a Fourier transform means (lens 6), which is inaccurate. Hamada et al. use lens 6 to project the moiré pattern on the photodetector and reduce the spot size of the beam; see col. 8, line 4 and col. 4, lines 46-60. Lens 6 is explicitly placed to cause the beam B to entirely impinge on the photodetector (col. 4, lines 16-19) so that the light incident on the photodetector can be made constant at all times (col. 4, line 66 to col. 5, line 1). Note that lens 6 has the same function in the first embodiment, described in col. 4, and the fifth embodiment, described in cols. 7-8. The formation of a Fourier image discussed in Hamada et al. (see col. 6, lines 5-6) is that of the diffraction grating at the Talbot distance. This is an inherent property of the grating and is not related to Fourier transforming a moiré deflectogram formed by two gratings. Hamada et al. do not disclose a means for optically Fourier transforming a moiré deflectogram.
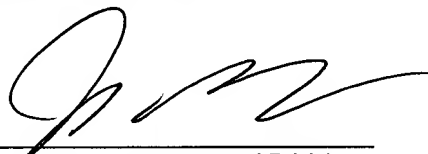
Further, although it is well known in the art that a variably transmitting optical means, such as an apodizer, can be used as a transmission filter, Norton et al. do not use the transmission filter to comprise a transmissive optic encoding intensity information, contrary to the Examiner's assertion. Instead, an apodizer is used to minimize the measurement spot size (col. 5, lines 61-2). In addition, although Hamada et al. mention grating angles (see, for example col. 6 lines 61-4), no reference to fringe angle is made in either reference. Thus applicant respectfully traverses the Examiner's assertion that the transmission filter of Norton et al. encodes intensity information upon the moiré deflectogram as a function of fringe angle when added to the wavefront sensor of Hamada et al. It would be impossible to encode intensity information as a function of fringe angle by combining the cited elements in this manner.

In view of the above amendments and remarks, it is respectfully submitted that all grounds of rejection and objection have been avoided and/or traversed. It is believed that the case is now in condition for allowance and same is respectfully requested.

If any issues remain, or if the Examiner believes that prosecution of this application might be expedited by discussion of the issues, the Examiner is cordially invited to telephone the undersigned attorney for Applicant at the telephone number listed below.

Respectfully submitted,

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Amendments to the Drawings:

The attached replacement drawing sheets include changes to Figures 4 and 5. Figure 4 has been amended to render "Figure 4" legible. Figure 5 has been amended to add reference sign 10.